

ANNUAL ADMINISTRATIVE REPORT (FY 2004) AND WORK PLAN (FY 2005) FOR INVENTORIES AND VITAL SIGNS MONITORING

FY 2004 – FY 2005

SOUTHERN PLAINS NETWORK

Includes: Alibates Flint Quarries National Monument, Bent's Old Fort National Historic Site, Capulin Volcano National Monument, Chickasaw National Recreation Area, Fort Union National Monument, Fort Larned National Historic Site, Lake Meredith National Recreation Area, Lyndon B. Johnson National Historical Park, Pecos National Historical Park, Sand Creek Massacre National Historic Site, and Washita Battlefield National Historic Site.

Southern Plains Network Approval Signatures

Margaret A. Johnston, Superintendent, Capulin Volcano National Monument, 2004 Chair of Board of Directors	Date
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Mitzi Frank, Superintendent, Fort Union National Historic Site, 2005 Chair of Board of Directors	Date
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Bruce Bingham, Regional Inventory and Monitoring Coordinator,	Date
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Dustin Perkins, Southern Plains Network Coordinator Intermountain Region	Date
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AARWP Checklist

[Enter an X or 'Yes' in the first column after you have completed an item]

	<u>Budget program (MS Access, aarwp_budget.mdb)</u>
X	The income amounts entered for Biological Inventories, Vital Signs Monitoring, Prototype \$\$ - Annual Transfer, Water Quality Monitoring and other sources matches the dollar amounts from the memos sent to the regions/networks by WASO (have you used the correct income amounts?).
X	In the Add/Edit Budget Records form, the amount shown for Total Expenses matches that for Total Income. (If it doesn't, enter a record under Expenses in the 7_Other category to make it balance; use an entry such as 'Unexpended funds' or 'Overspent Funds' in the Description column to explain the amount.)
X	For all Expense records, the Description field includes the name of the university, agency, company, or other vendor to help us document our outsourcing efforts. (If this expense involved a contract, cooperative agreement, interagency agreement, or other partnership, is it clear where the money went?)
X	For all Expense records, the correct item from the picklist for 'Where \$\$ Went' has been entered. [Think about who the check was written to; e.g., enter 'Other Non-Federal' for funding that went directly to the private sector, such as for purchases (computers, supplies, etc.), travel (airlines, rental cars, hotels).]
X	On the Status of Biological Inventories form, there is one record for each inventory that is described in the text section of the AARWP or in the budget program. Be sure to list each park that was involved in the particular inventory.
X	Each year's budget has been exported as an .rtf file (one for FY 2004 and one for FY 2005), and both files have been inserted into MS Word at the end of the AARWP document.
X	The file aarwp_budget.mdb has been renamed to include the 4-character network alpha code and the years, as shown in this example: NCCN_FY0405_aarwp.mdb
	<u>Annual Report and Work Plan (MS Word)</u>
X	I have carefully read the guidance for the AARWP and followed it.
X	A header or footer with the date that the aarwp was last revised has been included.
X	I gave special attention to the 'Public Interest Highlights' and 'Major Accomplishments' sections of the report. (We need good examples of the successes, applications, and highlights of the program to help us obtain funding for all 32 networks! Your 'Major Accomplishments' section is what we'll use for the I&M Program's annual Report to Congress to justify the funding spent by your network.)
X	In the 'Status of Park Vital Signs Monitoring' table, all entries are equal to or greater than the entries in last year's report.
X	Photographs that might be included in one of the reports to Congress, brochures, websites, or other materials that help the program have been submitted by the network. (See the photo database and guidelines for submitting photographs.)
X	The aarwp file has been renamed using the network's 4-character alpha code and the years (FY0405) as in the example NCCN_FY0405_aarwp.doc
X	The annual report has been approved by the appropriate individuals, per my region's procedures. (If you cannot get electronic signatures, it is okay to submit a hard copy with signatures after November 8.)
X	I have followed my region's procedures for submitting the two files (e.g., NCCN_FY0405_aarwp.doc and NCCN_FY0405_aarwp.mdb). (Most regions require you to submit the files through the regional office. The files may be zipped into a zip file if desired, and then submitted to Steven Fancy via either email or ftp).
	<u>Review of FY 2005 Work Plan by WASO</u>
No	[Enter Yes or No]: Has the FY 2005 workplan been approved by the network Board of Directors, and therefore ready for the full WASO review? (If you enter No, the WASO I&M and WRD offices will only briefly review the work plan for 'red flags'.

I. Overview and Objectives

The Southern Plains Inventory and Monitoring Network (SOPN) includes eleven national parks with significant natural resources in five states, including: Colorado, Kansas, New Mexico, Oklahoma, and Texas. Ten of these parks have been in the network since its inception. An eleventh park, Sand Creek Massacre NHS (SAND), (for complete list of park abbreviations see Table 1) is a recent addition to the National Park Service (NPS) and SOPN. SOPN has not yet been allocated inventory or vital signs monitoring funds for SAND.

Table 1. List of abbreviations and affiliations for the 11 Southern Plains Inventory and Monitoring Network parks.

Park Name	State	Region	Abbreviation
Alibates Flint Quarries National Monument	Texas	Intermountain	ALFL
Bent's Old Fort National Historic Site	Colorado	Intermountain	BEOL
Capulin Volcano National Monument	New Mexico	Intermountain	CAVO
Chickasaw National Recreation Area	Oklahoma	Intermountain	CHIC
Fort Larned National Historic Site	Kansas	Midwest	FOLS
Fort Union National Monument	New Mexico	Intermountain	FOUN
Lake Meredith National Recreation Area	Texas	Intermountain	LAMR
Lyndon B. Johnson National Historical Park	Texas	Intermountain	LYJO
Pecos National Historical Park	New Mexico	Intermountain	PECO
Sand Creek Massacre National Historic Site	Colorado	Intermountain	SAND
Washita Battlefield National Historic Site	Oklahoma	Intermountain	WABA

Fiscal Year (FY) 2004

Fiscal Year 2004 was a transitional year for SOPN with the major objectives being the completion of the biological inventories for the original 10 parks and the beginning stages of developing a vital signs monitoring program. In addition, for the first time the network had a permanent network coordinator and data manager on staff for the entire year. In FY04 SOPN was allocated \$149,000 in start-up funds for vital signs and the final allocation of biological inventory funding (\$37,000). The start-up funds allowed for a permanent staff that will enable a smooth transition to full funding that is anticipated in FY05.

In FY04, SOPN received the last allotment of biological inventory funding. Inventories have been completed or nearly completed for vertebrate animals and vascular plants for the original 10 network parks. Final reports or drafts of final reports were completed at seven parks in FY04. These reports built upon the knowledge base from reports completed in FY02 and FY03 (Appendix 2.)

Kansas Natural Heritage Inventory submitted final reports for fish, mammals, birds, reptiles and amphibians for Fort Larned National Historic Site (FOLS). Natural Heritage New Mexico (NHNM) finalized the vascular plant report for Fort Union National Monument (FOUN). The Nature Conservancy of Texas (TNC) submitted a final inventory report for plants, and a draft final report for mammals, fish, reptiles and amphibians at Lyndon B. Johnson National Historical Park (LYJO), and draft final reports for plants, fish, mammals, birds, reptiles, and amphibians for Lake Meredith National Recreation Area (LAMR) and Alibates Flint Quarries National Monument (ALFL). The Oklahoma Biological Survey (OBS) submitted a draft final report for mammals, birds, reptiles and amphibians at Chickasaw National Recreation Area (CHIC), and for plants at Washita Battlefield National Historic Site (WABA).

SOPN also moved forward with the certification of inventory data. SOPN conducted an analysis of the condition of data currently in the NPSpecies database, and the data that needs to be entered into the data base. A plan for the NPSpecies certification process was also developed.

SOPN took the first steps towards identifying vital signs and developing a monitoring program in FY04. SOPN staff conducted scoping sessions, compiled natural resource documents, and presented an overview of the inventory and monitoring program to all 11 network parks. The internal scoping sessions succeeded in introducing the SOPN staff to the resources and staff at each park, and established a foundation for future workshops. An access database was created from the information gathered during scoping workshops and from a follow-up questionnaire. This database contains prioritized lists of natural resources and stressors for each SOPN park and for the SOPN as a whole. This database will serve as a framework for vital signs development over the next four years. SOPN also forward funded a grassland conceptual model, and identified personnel to develop the freshwater conceptual models in FY05.

Fiscal Year (FY) 2005

SOPN is scheduled to receive its first full year of vital signs funding (\$389,000) in FY05. SOPN will complete the major (short-grass, mixed-grass, pinion-juniper) terrestrial conceptual models in FY05. During model development SOPN will hold workshops to allow for staff from SOPN parks and subject matter experts to review drafts of the conceptual model. At these workshops we will also develop potential vital signs for each of the natural resources and stressors that have been included in the access database. All of this information will be incorporated into the Phase I report due in October, 2005. SOPN will also prepare for the Phase II report by identifying vital signs selection processes and beginning protocol development. The NPSpecies certification plan will be implemented in FY05 by holding 2-3 NPSpecies Certification workshops. SOPN plans to use some vital signs monitoring money to fund select inventory gaps in the original 10 parks and biological inventories essential for vital signs development.

SOPN will receive its first year of water quality money (\$29,000) in FY05. SOPN has already identified major water quality issues and has gathered water quality information from each park during scoping activities in FY04. SOPN will continue gathering information about significant water bodies within the network. SOPN has identified three potential principal investigators who are interested in developing riverine and reservoir conceptual models. In FY05 SOPN will establish task agreements to develop these two aquatic models and will hold workshops with park staff and subject matter experts to review draft conceptual models and identify potential vital signs for water quality.

SOPN Objectives for Biological Inventories:

1. Locate and catalog existing park natural resource documents, data sets, and spatial information and ensure that information is readily available.
2. Continue conducting inventories to reach the Servicewide goal of documentation for 90% of the vertebrate animal and vascular plant species within the network parks.
3. Continue to evaluate status and identify data gaps within the core set of natural resource inventories for network parks, and conduct investigations of these gaps and species of special concern to network parks.

SOPN Objectives for Vital Signs Monitoring:

1. Hire and retain professional staff and secure office space and facilities that provide a safe, healthy, and productive environment.
2. Develop and maintain working and decision-making processes that engages technical staff and managers of network parks.
3. Implement and maintain an integrated GIS and data management program.
4. Summarize and analyze existing information and concepts important for assessing current and future monitoring efforts and needs in the network parks.
5. Identify and prioritize all aquatic indicators (including climatic and atmospheric), including the water quality component of the monitoring plan, and develop protocols and implement programs to monitor the Vital Signs.
6. Identify and prioritize all terrestrial indicators (including climatic and atmospheric indicators), and develop protocols implement programs to monitor Vital Signs.
7. Develop and maintain strategies to share information with network parks, scientists, and others interested in the network's I&M program.

II. Accomplishments (FY2004) and Scheduled Activities (FY2005)

A. Biological Inventories

Objective 1 Locate and catalog existing park natural resource documents, data sets, and spatial information and ensure that information is readily available.

Task A1.1- NPSpecies Data Entry

- FY 2004 Accomplishments: An assessment of the accuracy and comprehensiveness of the current entries in NPSpecies and an assessment of the data that still needs to be entered was completed. This process involved talking to park resource staff at scoping sessions, examining inventory reports, and analyzing the database.
- Scheduled FY 2005 Activities and Products: Finish data entry from inventory reports. Fix and clean existing data in NPSpecies database. In order to efficiently use inventory funding, the SOPN board had previously decided inventory funding for the smaller parks should focus efforts on field inventories and not towards NPSpecies data entry. This decision was supported by WASO I+M who promised to assist with data entry in future years.

Task A1.2 – Hold NPSpecies Certification Workshops

- FY 2004 Accomplishments: An NPSpecies Certification Plan was developed based on the National Inventory and Monitoring Webpage and conversations with other network data managers.
- Scheduled FY 2005 Activities and Products: After completing data entry, SOPN will hold 2-3 NPSpecies certification workshops. The SOPN plans to follow I+M guidelines for holding these workshops.

Objective 2 Continue conducting inventories to reach the Servicewide goal of documentation for 90% of the vertebrate animal and vascular plant species within the network parks.

Task A2.1- Vascular Plant Inventory

Parks involved: WABA, FOUN, LYJO, LAMR, FOLS, and ALFL

- FY 2004 Accomplishments: A final report was completed by the Texas Nature Conservancy and Botanical Research Institute of Texas (Roger Sanders, Guy Nesom and Jim Bergan) for LYJO, and draft final reports were completed for LAMR and ALFL. A final reports was received from New Mexico Natural Heritage (Esteban Muldavin) for FOUN. A draft final report was submitted by Oklahoma Biological Survey (Bruce Hoagland) for WABA. SOPN staff has commented on the draft final reports and are working with the principle investigators to incorporate these comments. A preliminary plant inventory was completed at SAND through a Cooperative Conservation Initiative grant received for restoration by the staff at Bent's Old Fort National Historic Site (BEOL).
- Scheduled FY 2005 Activities and Products: Complete final reports at LAMR, ALFL, and WABA. Enter data from inventories into NPSpecies database for FOUN, SAND, WABA, and FOLS. Receive final reports for LAMR, ALFL, and WABA. Fund vascular plant inventory at SAND. This new park has essentially no natural resource information. SOPN anticipates that it will receive inventory money for this park in the future. However an inventory of plants that includes a species list and the vegetation communities present at SAND is essential for future inventories and vital signs monitoring development. There is also the potential for streaked ragweed (*Ambrosia linearis*), an endemic known from only 6 locations in the world, to be

present at this park. SOPN will “borrow” money from the vital signs funding for the original 10 parks to fund this crucial inventory.

Task A2.2- Mammal Inventory

Parks involved: CHIC, LYJO, LAMR, FOLS, and ALFL

- FY 2004 Accomplishments: A final report was received from Kansas Natural Heritage Inventory (Jennifer Delisle) for FOLS. Draft final reports were completed by the Texas Nature Conservancy (Jim Bergan) for LYJO, LAMR, and ALFL, and for CHIC by the Oklahoma Biological Survey (Jeff Kelly). SOPN staff has commented on the draft final reports and are working with the principle investigators to incorporate these comments. SOPN submitted a proposal to USGS with Ernie Valdez (USGS) for bat inventories at SAND, FOUN, BEOL, Pecos National Historical Park (PECO), and Capulin Volcano National Monument (CAVO) that was not successful.
- Scheduled FY 2005 Activities and Products: Complete final reports for LYJO, LAMR, ALFL, and CHIC. Enter data from inventories into NPSpecies database for CHIC and FOLS. Submit proposals through the Servicewide comprehensive call and Rocky Mountain CESU annual call for rare vertebrate inventories at SAND. If these rare species are present at SAND they will be essential for the development of vital signs at this park.

Task A2.3- Bird Inventory

Parks involved: CHIC, LAMR, ALFL, WABA, and FOLS

- FY 2004 Accomplishments: A final report was received from Kansas Natural Heritage Inventory (Jennifer Delisle) for FOLS. Draft final reports were completed by the Texas Nature Conservancy (Jim Bergan) for LAMR and ALFL and by the Oklahoma Biological Survey (Jeff Kelly) for CHIC. Field work was completed by Oklahoma Biological Survey (Greg Smith) at WABA for a project that was not funded through Natural Resource Challenge. SOPN staff has commented on the draft final reports and are working with the principle investigators to incorporate these comments. Established a cooperative agreement with Rocky Mountain Bird Observatory (David Hanni) for a bird inventory at SAND. This park has the potential for several rare and listed bird species. Grassland birds have been used by the Prairie Cluster Prototype as a vital sign. Therefore, a bird inventory is necessary for vital signs development and park management. SOPN “borrowed” money from the original 10 parks vital signs funding for this project.
- Scheduled FY 2005 Activities and Products: Complete final reports for LAMR, ALFL, CHIC, and WABA. Complete data entry from inventories into NPSpecies database for SAND, CHIC, WABA and FOLS. Complete final report for SAND with Rocky Mountain Bird Observatory.

Task A2.4- Herptile Inventory

Parks involved: CHIC, LYJO, LAMR, ALFL, and FOLS

- FY 2004 Accomplishments: A final report was received from Kansas Natural Heritage Inventory (Jennifer Delisle) for FOLS. Draft final reports were completed by the Texas Nature Conservancy (Jim Bergan) for LYJO, LAMR and ALFL, and by

the Oklahoma Biological Survey (Jeff Kelly) for CHIC. SOPN staff has commented on the draft final reports and are working with the principle investigators to incorporate these comments.

- Scheduled FY 2005 Activities and Products: Complete final reports for LYJO, LAMR, ALFL, and CHIC. Enter data from inventories into NPSpecies database for CHIC and FOLS.

Task A2.5- Fish Inventory

Parks involved: FOLS, LYJO, LAMR, and WABA

- FY 2004 Accomplishments: A final report was received from Kansas Natural Heritage Inventory (Jennifer Delisle) for FOLS. Draft final reports were completed by the Texas Nature Conservancy (Jim Bergan) for LYJO and LAMR. A fish inventory at WABA that was not funded through Natural Resource Challenge dollars was completed by Oklahoma Biological Survey (Elizabeth Bergey).
- Scheduled FY 2005 Activities and Products: Complete final report for LYJO and LAMR. Enter data from inventories into NPSpecies database for WABA and FOLS. LYJO has arranged for a deep-water fish inventory to be conducted by the Lower Colorado River Authority at no cost to SOPN. This deep-water area was missed in original inventories due to funding constraints.

Objective 3 Continue to evaluate status and identify data gaps within the core set of natural resource inventories for network parks, and conduct investigations of these gaps and species of special concern to network parks.

Task A3.1- Collate inventory information from SOPN parks

- FY 2004 Accomplishments: The SOPN staff reviewed all available inventory information and prioritized inventory needs. Gaps in completed inventory work were highlighted. These gaps were primarily due to budget constraints (bats due to cost of bat detectors, medium to large mammals due to automated cameras, deep water fish inventories due to boats). Two lists were created, one containing inventory needs for the original 10 SOPN parks for which SOPN has received inventory money, and a second list for SAND that has not been allocated any inventory funds. These lists were approved by the technical committee meeting in July and were used to identify high priority inventory projects that are essential for vital signs development to be funded in FY05. This inventory needs list was also posted under the Research Needs section of the Great Plains CESU website.
- Scheduled FY 2005 Activities and Products: Analyze any new inventories completed in FY2005 for completeness, and review and update the prioritized inventory need list.

Task A3.2- Fill Inventory Gaps

- FY2004 Accomplishments: Bats were a gap that was not filled with the original biological inventories due to the high costs of mist nets and bat detectors. SOPN staff submitted a proposal with USGS (Ernie Valdez) to fund inventories at five SOPN parks, which was unsuccessful.

- Scheduled FY2005 Activities and Products: Fund an intensive inventory of the arch wetland at BEOL. According to park staff this wetland did not receive enough attention in the initial inventory, and this wetland has a high likelihood of being incorporated into the vital signs monitoring program. This inventory will focus on hydrology, plants, birds, fish, amphibians, and invertebrates in this rare ecosystem in southeastern Colorado.

Task A3.3- Search and plan for SAND inventory funding

- FY 2004 Accomplishments: SOPN decided to create separate lists in Task A3.1 since we have not yet received inventory money for SAND. SOPN decided to only pursue inventories at SAND that were deemed essential in developing a vital signs monitoring program for this park and wait to complete non-essential inventories when we are allocated additional funding. These essential inventories were vascular plants, birds, and rare mammals. SOPN had preliminary discussions with Kathy Tonnessen at Rocky Mountain CESU about submitting a proposal for inventories of rare animals at SAND. Established a cooperative agreement with Rocky Mountain Bird Observatory for a bird inventory.
- Scheduled FY 2005 Activities and Products: Will fund a plant inventory at SAND out of vital signs monitoring money. Will submit proposals for plant inventories and rare animals to the Servicewide Comprehensive Call and Rocky Mountain CESU call. Continue consulting with Colorado Division of Wildlife for partnership opportunities for these rare species. Finish SAND bird inventory with Rocky Mountain Bird Observatory at SAND.

Task A3.4 – Vegetation Mapping Inventories

- FY2004 Accomplishments: No vegetation maps have been completed for SOPN parks and the mapping process has only been initiated at one SOPN park (LAMR) starting in FY2004. No other vegetation maps are scheduled to be initiated in the near future. Conducted initial conversations with Chris Lea about the possibility of contributing SOPN funds to the vegetation mapping program in an effort to speed up mapping in SOPN.
- Scheduled FY2005 Activities and Products: SOPN decided that these maps are a high priority and therefore SOPN may allocate approximately \$40,000 to the vegetation mapping program. Conversations will be conducted with the vegetation mapping program to determine if this amount can result in initiating projects at SOPN parks in the near future.

B. Vital Signs Monitoring

Objective 1 Hire and retain professional staff and secure office space and facilities that provide a safe, healthy, and productive environment.

Task B1.1- Establish network positions and office(s)

- FY 2004 Accomplishments: A partnership was established with the Gulf Coast CESU and Texas A+M University. One student has started work, and a second has been identified to start in October. Gulf Coast CESU is funding the work in FY2004 by

providing a match (\$1,000) that SOPN will provide in FY05. Discussed possibility of future internships with faculty at Texas State University and Texas A+M University. A preliminary staffing plan was developed and approved by the Board. The administrative agreement between SOPN and its' host park LYJO was completed. The agreement outlines the roles and responsibilities for each entity. This arrangement is mutually beneficial to both parties and the SOPN Board and LYJO wish to continue this arrangement. The Board evaluated the network coordinator and data manager positions and decided they should be at the full performance level (network coordinator at GS-12, and data manager at GS-9/11).

- Scheduled FY 2005 Activities and Products: Allocate at least \$1,000 to Gulf Coast CESU for interns as a match for the Gulf Coast CESU contribution in FY04. Hire additional STEP (1-2) technicians at Texas A+M or Texas State University to assist with library research and data entry. Continue revising and developing staffing plan with additional details about job descriptions and duties. The Board will consider the necessary personnel actions to ensure continuity in SOPN positions.

Task B1.2- Ensure staff receive proper training and are updated with the most recent biological information.

- FY 2004 Accomplishments: Data manager attended Spatial Odyssey in Orlando, FL, Data Management for Data Managers in Fort Collins, CO, Data Manager's Meeting in Las Vegas, NV, and Arc View training in Austin, TX (no travel costs). Network Coordinator attended Grant Writing Training Workshop at Grand Teton National Park, Society for Ecological Restoration in Austin, TX (no travel costs), Southwestern Association of Naturalist in San Antonio, TX (no travel costs), Feral Hog Symposium in College Station, TX (no travel costs), the Intermountain Regional I+M meeting in Lakewood, CO, Fundamentals II at Grand Canyon National Park (no travel costs for SOPN) and the North American Prairie Conference in Madison, WI. SOPN obtained an uncover account that provides the titles to recently published scientific literature. Assisted WASO office with preliminary planning for National I+M meeting tentatively set for February, 2005 in Austin, TX. Board Chair also attended the IMR I+M Regional Meeting in Lakewood, CO.
- FY 2005 Activities and Products: Data manager plans to attend data managers meeting, national I+M meeting and other relevant training opportunities. Network Coordinator plans to attend national I+M meeting, Fundamentals V in Harpers Ferry, WV, supervisor training and other relevant training opportunities.

Objective 2 Develop and maintain working and decision-making processes that engages technical staff and managers of network parks.

Task B2.1- Coordinate network activities

- FY 2004 Accomplishments: Held the FY2003 annual meeting in Johnson City, TX in October, 2003. Elected Maggie Johnston (CAVO) as 2004 Chair of the Board. SOPN Board decided that August would be a better time for annual meetings in order to allow for sufficient time to review the annual report and work plan. Held FY2004 annual meeting in Austin, TX in August, 2004. Elected Mitzi Frank (FOUN) as 2005 Chair of the Board. Both of these meetings were held in conjunction with the

network Servicewide Comprehensive Call for natural resources. By holding these meetings jointly we reduced travel costs for NPS, although it was increased slightly for SOPN. At the August meeting the Board accepted the resignation of Larry Norris, Desert Southwest CESU from his advisory board position. The Board elected Gillian Bowser, Gulf Coast CESU as an advisory board member. Held a Board of Directors meeting in May and a Technical Committee meeting in July via conference call. Exchanged several emails and phone calls with Board, Technical Committee and park Superintendents. Presented program overview and progress update to a total of 60 NPS employees at the 11 network parks. Established an administrative agreement detailing the arrangement between SOPN and its host park, LYJO. Created a webpage for efficient communication with SOPN park staff and distributing information to the public.

- Scheduled FY 2005 Activities: Hold FY2005 annual meeting in August, 2005. Elect a new chair of the board. Continue to hold necessary conference calls with technical committee and board for relevant SOPN decisions. Continually update webpage.

Objective 3 Implement and maintain an integrated GIS and data management program.

Task B3.1- Ensure efficient and central location for data entry and certification

- FY 2004 Accomplishments: Established an MOA between SOPN and all 11 network parks designating the SOPN data manager as point-of-contact for NPSpecies. Created a SOPN central files directory structure for all relevant SOPN documents and files. Created a library database in Procite with 379 entries each with titles, authors, keywords and a unique identification number. Data manager provided training on NPSpecies to staff at LYJO and CAVO, on NatureBib to LYJO, and overviews of NPSpecies to staff at all 11 parks. Developed an NPSpecies needs list outlining the information needed to be entered and existing data that needs to be cleaned up prior to NPSpecies certification. Provided training to Texas A+M intern who will do some NPSpecies data entry.
- Scheduled FY 2005 Activities: Continue to build Procite library database. Complete current data entry for NPSpecies. Hold NPSpecies certification workshops. Develop plan for future NPSpecies data entry and revisiting certification. Develop project tracking database. Begin work on vital signs data management program. Expand natural resource and stressor database to include justification statements and preliminary monitoring objectives.

Task B3.2- Gather data, build, and update an integrated GIS program

- FY 2004 Accomplishments: Compiled GIS information pertinent to SOPN from all 11 parks, IMR regional office and public sources on the internet. Organized and collected data and associated metadata into a standardized file structure. Began developing a GIS layers needs list.
- Scheduled FY 2005 Activities: Continue to gather spatial information for SOPN parks. Create a list of prioritized GIS needs. Begin filling a list of needs by developing, purchasing, or finding spatial data.

Objective 4 Summarize and analyze existing information and concepts important for assessing current and future monitoring efforts and needs in the network parks.

Task B4.1- Summarize and analyze existing information.

- FY 2004 Accomplishments: Gathered existing natural resource information and took tours at all 11 parks. Conducted library research for relevant papers. Park staff identified important natural resources and stressors during scoping sessions. SOPN staff added to the list of natural resources through a literature review. A questionnaire that included natural resources and stressors that were identified at all 11 parks and in the literature was sent out to park staff. Identified Edwin Juarez, graduate student intern at Texas A+M University, to review natural resource information and write park summaries for use in the Phase I report.
- Scheduled FY 2005 Activities and Products: Have Texas A+M intern write natural resource park summaries. Hire STEP technician to continue gathering relevant scientific literature. Conduct literature review of major ecosystem types within SOPN. Develop and write Chapter 1 (Introduction and Background) for Phase I report.

Objective 5 Identify and prioritize all aquatic indicators (including climatic and atmospheric indicators), including the water quality component of the monitoring plan, and develop protocols and implement programs to monitor the Vital Signs.

Task B5.1- Development and Identification of Vital Signs

- FY 2004 Accomplishments: Vital signs scoping sessions were held at all 11 parks. Thirty-four NPS staff participated in the scoping sessions. Eleven additional people were contacted for scoping interviews at the request of an individual park. These additional people had in-depth knowledge of the park (employees of adjacent federal agencies or former NPS employees). Created an access database that prioritized natural resources and stressors for all 11 parks individually and for the network as a whole. Priority rankings were established by individual park staff.
- Scheduled FY 2005 Activities and Products: Hold workshops by ecosystem. At these workshops all network parks with that ecosystem and subject matter experts will be invited to attend. The conceptual model PIs will present a draft of their model for review and critique. This model will also serve as a framework for the development of potential vital signs. Potential vital signs with justification statements and preliminary monitoring objectives will be developed for each natural resource and stressor identified in the access database.

Task B5.2- Develop Conceptual Models

- FY 2004 Accomplishments: A plan for completing conceptual models was developed. Have identified three principle investigators who are interested in developing riparian and reservoir conceptual models for SOPN.
- Scheduled FY 2005 Activities and Products: Establish cooperative agreements and complete riparian and reservoir conceptual models. Cooperative agreements will

include multiple opportunities for SOPN and network park staff to contribute and review the models. The cooperative agreement will also specify that the models will address the major natural resource concerns that have been identified in the access database.

Task B5.3- Develop Water Quality Program

- FY 2004 Accomplishments: Although SOPN received no water quality funding through FY 2004, we have still gathered valuable water quality information through scoping sessions and gathering of literature from park libraries and the scientific literature. At the scoping sessions major water quality issues, threats and existing water quality monitoring programs were discussed. SOPN staff participated in LYJO's existing water quality monitoring program and became certified in the Texas State Water Quality Monitoring Program.
- Scheduled FY 2005 Activities and Products: Continue to hold informal meetings with park staff that are actively involved in maintaining resource water quality within network parks. Work with park staff and Technical Committee to compile information on state-identified "impaired" (305b and 303d-listed) waters within network parks, compile information on state-identified outstanding waters, or special protection waters, compile information on other water bodies that are highly significant at the park or Network scale. Continue gathering relevant information on water quality monitoring within the SOPN boundaries. Work with park staff at LYJO to review proposal to study sedimentation of dams along the Pedernales River.

Task B5.4- Planning towards Completion of Monitoring Plan

- FY 2004 Accomplishments: An implementation calendar to reach the goals of the Phase I report was created. This plan outlined details and a timeline for scoping sessions in FY04, development of conceptual models, and workshops where potential vital signs will be developed.
- Scheduled FY 2005 Activities and Products: Develop a strategic plan that outlines the schedule and details for developing the Phase III final report that is due October 1, 2008. Decide on a vital signs selection process. Complete Phase I Vital Signs Monitoring report.

Objective 6 Identify and prioritize all terrestrial indicators (including climatic and atmospheric indicators), and develop protocols and implement programs to monitor Vital Signs.

Task B6.1- Development and Identification of Vital Signs

- FY 2004 Accomplishments: Vital signs scoping sessions were held at all 11 parks. Thirty-four NPS staff participated in the scoping sessions. Eleven additional people were contacted for scoping interviews at the request of an individual park. These people had in-depth knowledge of the park (employees of adjacent federal agencies or former NPS employees). Created an access database that prioritizes natural resources and stressors for all 11 parks individually as well as for the network as a whole. Priority rankings were established by individual park staff.

- Scheduled FY 2005 Activities and Products: Hold workshops by ecosystem. At these workshops all network parks with that ecosystem and subject matter experts will be invited to attend. The conceptual model PIs will present a draft of their model for review and critique. This model will also serve as a framework for the development of potential vital signs. Potential vital signs with justification statements and preliminary objectives will be developed for each natural resource and stressor identified in the access database.

Task B6.2- Develop Conceptual Models

- FY 2004 Accomplishments: A plan for completing conceptual models was developed. A cooperative agreement for grassland conceptual models was established with Dr. Dan Tinker and Dr. Ann Hild at the University of Wyoming. This project was forward funded in 2004 with a completion date in FY2005. The cooperative agreement includes multiple opportunities for SOPN and network park staff to contribute and review the models. The cooperative agreement also specified that the models address the major natural resource concerns that have been identified in the access database. Talked to John Gross about landscape vulnerability conceptual model and he advised to wait until several other I+M landscape analysis cooperative agreements were completed.
- Scheduled FY 2005 Activities and Products: Develop a pinion-juniper conceptual model by establishing a cooperative agreement for a new model, or revise another networks pinion-juniper model. Evaluate models for eastern deciduous forest from other I+M networks for potential revision for SOPN use. Consider funding a landscape vulnerability conceptual model pending discussions with John Gross and other I+M staff regarding the results of current I+M landscape analysis cooperative agreements that will be completed in the near future.

Task B6.3- Planning for Completion of Monitoring Plan

- FY 2004 Accomplishments: Implementation calendar to reach the goals of the Phase I report was created. This plan outlined details and a timeline for scoping sessions in FY04, development of conceptual models, and workshops in FY05 where potential vital signs will be developed.
- Scheduled FY 2005 Activities and Products: Develop a strategic plan that outlines the schedule and details for developing the Phase III final report due October 1, 2008. Decide on a vital signs selection process. Complete Phase I Inventory and Monitoring report.

Objective 7 Develop and maintain strategies to share information with network parks, scientists, and others interested in the network's I&M program.

Task B7.1- Develop and maintain relationships with parks, other I&M networks, and research entities.

- FY 2004 Accomplishments: Network coordinator attended IMR I+M regional meeting. Data manager attended annual data manager's meeting. Data manager and network coordinator participated in four national I+M conference calls that took place

in lieu of a national meeting to save travel costs. Data manager and network coordinator had several phone calls and exchanged email with other I+M network staff. SOPN developed a webpage in cooperation with the University of Montana (Kathy Tonnessen and Zia Maumenee) for communication with NPS and the public. SOPN was the lead for a multi-park proposal for prairie restoration for the 2005 CCI call and is in the initial stages of a second proposal for the 2006 CCI call. The 2005 CCI proposal tied with one other project for the highest ranked proposal of 69 proposals submitted to the Intermountain Region. Helped with information gathering for two feral animal proposals, one within SOPN and one coordinated through the Gulf Coast CESU. Expanded awareness of SOPN I+M program by making presentations at Feral Hog Symposium in College Station, TX, presenting posters at the North American Prairie Conference in Madison, WI and the Southwestern Association of Naturalists in San Antonio, TX, and visiting natural resource departments at Texas State and Texas A+M universities. Discussed partnering opportunities with NRCS, USGS, New Mexico Game and Fish, and Colorado Division of Wildlife. Network Coordinator was a member of a national I+M workgroup to develop a vital signs classification system. Network coordinator was the I+M representative on an IMR workgroup to review and revise the Natural Resources Servicewide Comprehensive Call guidelines and procedures. Assisted with planning for 2005 National I+M meeting in Austin, TX.

- Scheduled FY 2005 Activities and Products: Attend national and regional I+M meetings. Update webpage on at least a quarterly basis. Continue to help with planning for 2005 National I+M Meeting in Austin, TX. Encourage network approach for completing natural resource inventories (vegetation mapping, geologic resources, bats, etc.). Continue to promote SOPN and look for partnerships to increase our funding, effectiveness, and scientific understanding.

Task B7.2- Subject Expert Identification

- FY 2004 Accomplishments: Member parks developed and solidified relationships with biological experts during the biological inventories. SOPN developed a list of subject matter experts for conceptual model workshops in FY 2005. SOPN Board decided not to have an overarching science advisory committee, but instead contact subject matter experts on an as-needed basis. SOPN will continue to keep track of subject-matter experts and will be able to draw upon the expert databases at the four CESUs with connections to the Southern Plains Network.
- Scheduled FY 2005 Activities and Products: Invite subject matter experts to workshops. Continue identifying and communicating with subject matter experts in a wide variety of roles.

III. Staffing

Inventory and Monitoring Staff

Bruce Bingham, Intermountain Regional Coordinator	(303) 987-6706
Dusty Perkins, Ph.D., Southern Plains Network Coordinator	(830) 868-7128 x 281
Heidi Sosinski, Southern Plains Network Data Manager	(830) 868-7128 x 282
Edwin Juarez, Texas A+M University Intern	(979) 764-4131
Tomyeanne Zettner, Texas A+M University Intern	(512) 925-2406

Board of Directors

Maggie Johnston, Chair of Board, 2004, (Supt., CAVO)	(505) 278-2201 x210
Mitzi Frank, 2004 and Chair of Board 2005, (Supt., FOUN)	(505) 425-8025
Steve Linderer, 2004 and 2005, (Supt., FOLS)	(620) 285-6911
Paul Eubank, 2004, (Environmental Specialist, LAMR/ALFL)	(806) 857-0309
Bruce Bingham, 2004 and 2005, (IMR I&M Coordinator)	(303) 987-6706
Dusty Perkins, Ph.D., 2004 and 2005, (Network Coordinator)	(830) 868-7128 x281
Karren Brown, 2005, (Supt. LAMR/ALFL)	(806) 857-3151
Alden Miller, 2005, (Chief of Resources and Facilities, WABA)	(580) 497-2742 x3
Larry Norris, ad-hoc 2004, (DSW-CESU)	(520) 621-7998
Gary Willson, Ph.D., ad-hoc 2004 and 2005, (GP-CESU)	(402) 472-5047
Gillian Bowser, Ph.D., ad-hoc 2005, (GC-CESU)	(979) 845-9787

Technical Committee

Paul Eubank, 2004 Chair, (Environ. Specialist, LAMR/ALFL)	(806) 857-0309
Alden Miller, 2005 Chair, (Chief Resources + Facilities, WABA)	(580) 497-2742 x3
Ruben Andrade, (Supervisory Park Ranger, FOUN)	(505) 425-8025 x28
Steve Burrough, (Chief Resource Management, CHIC)	(580) 622-3161 x601
Brian Carey, (Chief Resource Mgmt. + Visitor Protection, LYJO)	(830) 868-7128 x232
Fran Pannebaker, (Natural Resource Specialist, BEOL)	(719) 383-5010 x16
Brian Quigley, (Chief Park Ranger, CAVO)	(505) 278-2201 x230
Felix Revello, (Supervisory Park Ranger, FOLS)	(620) 285-6911
Alexa Roberts, (Superintendent, SAND)	(719) 438-5916
Marten Schmitz, (Park Ranger, PECO)	(505) 757-2611 x234
Dusty Perkins, (Network Coordinator)	(830) 868-7128 x281

Contractors/Cooperators

Dr. Jim Bergan, The Nature Conservancy – Inventories at LAMR, ALFL, LYJO
 Dr. Elizabeth Bergey, Oklahoma Biological Survey – WABA fish inventories
 Dr. Gillian Bowser, Gulf Coast CESU – Texas A+M Interns
 Sue Braumiller, NPS Intermountain and Midwest Hydrologist at CHIC – Water Quality
 Jennifer Delisle, Kansas Natural Heritage Inventory – FOLS inventories
 David Hanni, Rocky Mountain Bird Observatory – SAND bird inventories
 Dr. Ann Hild, University of Wyoming – Grassland Conceptual Modeling
 Dr. Bruce Hoagland, Oklahoma Biological Survey – WABA plant inventories
 Dr. Jeff Kelly, Oklahoma Biological Survey – CHIC Inventories

Zia Maumenee, University of Montana – Webpage design
 Dr. Esteban Muldavin, Natural Heritage New Mexico – FOUN plant inventories
 Dr. Guy Nesom, Botanical Research Institute of Texas – LAMR/ALFL plant inventories
 Dr. Dan Tinker, University of Wyoming – Grassland Conceptual Modeling
 Dr. Kathy Tonnessen, University of Montana – Webpage Design and VS planning
 Dr. Roger Sanders, Botanical Research Institute of Texas – LYJO plant inventories
 Dr. Greg Smith, Emporia State University – WABA bird inventories

IV. Reports, Publications and Presentations

- Bergey, E. A. 2003. Aquatic invertebrates and fishes of the Washita River in the Washita Battlefield National Historic Site. Oklahoma Biological Survey.
- Delisle, J. M. and W. H. Busby. 2004. Biological inventory for vertebrates at Fort Larned National Historic Site of the Southern Plains Network. Kansas Natural Heritage Inventory.
- Hoagland, B. V. and A. Buthod. In Press. Vascular flora of Washita Battlefield National Historic Site, Roger Mills County, Oklahoma. Sida ###:##-##.
- Muldavin, E., Y. Chauvin, A. Browder, and T. Neville. 2004. A vegetation survey and map of Fort Union National Monument. Natural Heritage New Mexico.
- Patrikeev, M. T. 2004. Nest usurpation with probable nest predation by red-headed woodpeckers (*Melanerpes erythrocephalus*) on ladder-backed woodpeckers (*Picoides scalaris*) in the Texas Panhandle. Bulletin of Texas Ornithological Society 37(2):29-30.
- Patrikeev, M., T. Bonner, and G. M. Trujillo. In Review. Occurrence of the river shiner, *Notropis blennioides* in Lake Meredith, Texas. Submitted to The Southwestern Naturalist.
- Patrikeev, M. and M. Gallyoun. 2004. Fishes, amphibians, reptiles, and mammals of Lyndon B. Johnson National Historical Park, Gillespie and Blanco Counties, Texas. The Texas Nature Conservancy.
- Perkins, D. W. 2004. The Southern Plains Inventory and Monitoring Network: Progress and future plans. Poster presented to North American Prairie Conference, Madison, Wisconsin, August, 2004.
- Perkins, D. W. 2004. The Southern Plains Inventory and Monitoring Network: Progress and future plans. Poster presented to Southwestern Association of Naturalists, San Antonio, Texas, April, 2004.
- Perkins, D. W. 2004. The status of feral animals in the Southern Plains Network. Presentation at the Texas Feral Hog Symposium, College Station, TX, July, 2004.
- Sanders, R. W. and M. Gallyoun. 2004. Vascular plants of Lyndon B. Johnson National Historical Park, Blanco and Gillespie Counties, Texas: Results of a 2002 floristic inventory and related research reviews. Botanical Research Institute of Texas and the Texas Nature Conservancy.

V. Status of Park Vital Signs Monitoring

Southern Plains Network 2003	Air Quality	Water Quality	Water Quantity	Geologic Resources	Plants	Animals	Landscape Characteristics
Planning and Design							
# parks monitoring w/ NRC funding	11	11	11	11	11	11	11
# parks monitoring w/ other funding	0	0	1	0	0	0	0
Protocols Implemented							
# parks monitoring w/ NRC funding	0	0	0	0	0	0	0
# parks monitoring w/ other funding	1	3	1	0	3	5	0
Analysis/Synthesis Available							
# parks monitoring w/ NRC funding	0	0	0	0	0	0	0
# parks monitoring w/ other funding	1	3	0	0	1	3	0

VI. USGS Protocol Development and Monitoring-Related Research Needs

- *Development of Vital Signs for restored grasslands* - Grassland systems and restoring degraded grasslands were identified during scoping sessions and subsequent ranking questionnaires sent to park staff as the most important natural resource issues for the Southern Plains Inventory and Monitoring Network (SOPN). Scoping sessions revealed that prairie restoration is either underway or is in the planning process at 9 of the 11 parks. The restoration and health of grasslands in the SOPN will play a major role in vital signs monitoring, however it is unclear what will make a good prairie restoration vital sign. Prairie restoration in tall-grass systems has advanced dramatically in recent decades, however there has been considerably less restoration effort in mixed- and particularly short-grass systems. Grassland birds have been used by the Prairie Cluster as a vital sign in tallgrass systems and as an ecological indicator by Rocky Mountain Bird Observatory in short-grass systems. However many of the parks in the SOPN are small and therefore may not have a complete grassland bird community with sufficient numbers for monitoring even when fully restored. For this reason a new vital sign that can be monitored on small short-grass prairie fragments must be developed. Ideally the vital signs for restored prairie would dovetail on vital signs used for intact grassland fragments.
- *Assistance with Water Quality Monitoring Program* – Nine of the eleven parks within SOPN have significant freshwater resources within the park boundaries. Two of the parks have a reservoir which is the primary reason for the park's existence. SOPN is due to receive its first year of water quality funding, \$29,000, in fiscal year 2005. SOPN anticipates that additional assistance will be needed with monitoring planning and design in order to design a water quality program for 2 reservoirs and riverine systems that traverse 9 of the 11 parks.

VII. Budget Narrative

In fiscal year 2004 SOPN received \$149,000 in start up funds for vital signs monitoring. The majority of these funds went towards personnel costs of network staff and administrative arrangements (4.0% of total budget) with the host park, LYJO. Network staff used these funds to visit and hold scoping sessions at all 11 parks within the network. Vital signs funds were also used to attend meetings, training and conferences, and purchasing a digital camera, office supplies and software. The network coordinator and data manager were not hired until the end of FY03. Therefore, SOPN used vital signs funds to hold the FY03 annual meeting in early FY04.

SOPN also received \$37,000 in inventory funds in FY04. While SOPN still has crucial inventory holes to fill, the Board decided that SOPN should “borrow” these inventory funds to forward fund a grassland conceptual model (\$23,617.50) with cooperators at the University of Wyoming. Forward funding was necessary due to the scheduled large increase in vital signs funding from \$149,000 in FY04 to \$389,000 in FY05 and the components of the Phase I report that is due October 1, 2005. SOPN can not set up conceptual model cooperative agreements with FY05 funds until we are certain we will

get the large funding increase. It is possible that SOPN may not receive its full funding allocation until late winter or early spring of 2005. At this time it would be too late to set up cooperative agreements for conceptual models, and then develop these models in time to use them in workshops that will generate essential information for the Phase I report.

SOPN had an 11th park, SAND added to the network after inventory money had been allocated. SOPN is anticipating additional inventory funding for this park in the future and would like to minimize spending money intended for the original 10 parks on SAND. However, SOPN decided to “borrow” money from the original 10 parks to fund a bird inventory with Rocky Mountain Bird Observatory at SAND. There is the possibility of several listed bird species to be present at this park, and grassland birds have been used by the Prairie Cluster Prototype as a vital sign. This inventory will generate information that will be essential information for developing the Phase I report. SOPN also used inventory funds to hold its FY04 annual meeting in August. The annual meeting was moved to this time to allow for more meaningful review and contribution of the AARWP by the Technical Committee and Board of Directors.

In FY05 SOPN is scheduled to receive the first year of full vital signs funding, \$389,000. SOPN will use the money to fund freshwater river/stream and reservoir conceptual models. SOPN may also fund new or the revision of models from another network for pinion-juniper and eastern deciduous ecosystems. SOPN may also fund a landscape vulnerability conceptual model, pending the results of several non-SOPN I+M agreements for landscape vulnerability and analysis. SOPN will also use a large portion of these funds to hold 2-4 conceptual model workshops and 2-3 NPSpecies certification sessions. SOPN will continue to fund two permanent positions, network coordinator and data manager, and allocate money to the host park (2.4% of total budget), LYJO, for administrative support. SOPN will add STEP and/or SCEP positions in FY05. SOPN will “borrow” from the original 10 parks to fund a plant inventory at SAND. This inventory, as well as birds outlined above, were identified by SOPN as the two inventories essential for vital signs development at SAND. If rare species are detected at SAND, additional inventories will determine more precise locations and population levels at the park. SOPN fund an inventory of the arch wetland at BEOL that was identified as a need for vital signs in FY04. SOPN also will investigate jumpstarting the SOPN vegetation mapping program by contributing approximately \$40,000 to this program. SOPN will also purchase additional office equipment and computers to provide workspace for the STEP positions. SOPN will continue to send staff to important meetings, training opportunities and I+M meetings.

In FY05 SOPN is scheduled to receive the first year of water quality funding, \$29,000. This money will fund a reservoir conceptual model and assist with holding a scoping and conceptual model workshop where potential vital signs will be developed.

VIII. Budget Summary - FY04 Admin Report and FY 05 Work Plan***Budget Summary Fiscal Year 2004***

FY04 Admin Report

Network: 26 Southern Plains

Category: 1_Income

<i>Description</i>	<i>\$ Amount</i>	<i>\$\$ Source</i>	<i>Where \$ Went</i>	<i>Comments</i>
SOPN Inventory Money	\$37,000.00	I&M - Biol. Inventory \$\$		
Vital Signs Monitoring	\$149,000.00	I&M - VS Monitoring \$\$		
Subtotal	\$186,000.00			

Category: 2_Personnel

<i>Description</i>	<i>\$ Amount</i>	<i>\$\$ Source</i>	<i>Where \$ Went</i>	<i>Comments</i>
Network Coordinator Salary	\$69,889.84	I&M - VS Monitoring \$\$	NPS	
Data Manager Salary	\$51,634.65	I&M - VS Monitoring \$\$	NPS	
Administrative Support	\$7,489.48	I&M - VS Monitoring \$\$	NPS	
Subtotal	\$129,013.97			

Category: 3_Coop. Agreements

<i>Description</i>	<i>\$ Amount</i>	<i>\$\$ Source</i>	<i>Where \$ Went</i>	<i>Comments</i>
Grassland Conceptual Model - University of Wyoming	\$23,617.50	I&M - Biol. Inventory \$\$	University-CESU	
Sand Creek Bird Survey - Rocky Mountain Bird Observatory	\$5,400.00	I&M - Biol. Inventory \$\$	Other non-Federal	
Subtotal	\$29,017.50			

Category: 5_Operations/Equipment

<i>Description</i>	<i>\$ Amount</i>	<i>\$\$ Source</i>	<i>Where \$ Went</i>	<i>Comments</i>
Office Supplies (network transceivers, software, ethernet connection, photocopies)	\$1,144.68	I&M - VS Monitoring \$\$	Other non-Federal	
Digital Camera	\$632.51	I&M - VS Monitoring \$\$	Other non-Federal	
Subtotal	\$1,777.19			

Category: 6_Travel

Description	\$ Amount	\$\$ Source	Where \$ Went	Comments
CHIC Scoping	\$347.10	I&M - VS Monitoring \$\$	Other non-Federal	
North American Prairie Conference	\$854.83	I&M - VS Monitoring \$\$	Other non-Federal	
2004 Annual Director's Meeting	\$7,670.63	I&M - Biol. Inventory \$\$	Other non-Federal	
2003 Annual Director's Meeting	\$5,411.57	I&M - VS Monitoring \$\$	Other non-Federal	
FOLS/BEOL/SAND Scoping	\$2,025.89	I&M - VS Monitoring \$\$	Other non-Federal	
LAMR/ALFL/WABA Scoping	\$589.00	I&M - VS Monitoring \$\$	Other non-Federal	
2004 Annual Director's Meeting	\$349.75	I&M - VS Monitoring \$\$	Other non-Federal	
Spatial Odyssey	\$999.99	I&M - VS Monitoring \$\$	Other non-Federal	
Grant Writing Training	\$1,276.77	I&M - VS Monitoring \$\$	Other non-Federal	
Data Manager's Meeting	\$1,074.76	I&M - VS Monitoring \$\$	Other non-Federal	
Perkins PCS Move	\$268.48	I&M - VS Monitoring \$\$	Other non-Federal	
IMR I+M Meeting	\$693.11	I&M - VS Monitoring \$\$	Other non-Federal	
Data Management for Data Managers	\$1,049.60	I&M - VS Monitoring \$\$	Other non-Federal	
CAVO/FOUN/PECO Scoping	\$1,741.36	I&M - VS Monitoring \$\$	Other non-Federal	
Subtotal	\$24,352.84			

Category: 7_Other

Description	\$ Amount	\$\$ Source	Where \$ Went	Comments
Miscellaneous Costs (folders for meeting, Supplies, conference fees, parking, business cards)	\$1,280.49	I&M - VS Monitoring \$\$	Other non-Federal	
Overspent funds - August annual meeting actual costs slightly higher then estimated	(\$566.60)	I&M - VS Monitoring \$\$	Other non-Federal	
Unexpended funds - Small amount of unspent funds absorbed by meeting cost overrun with VS Monitoring Funds	\$311.87	I&M - Biol. Inventory \$\$	Other non-Federal	
Room and AV Charges for Annual Meeting	\$812.74	I&M - VS Monitoring \$\$	Other non-Federal	
Subtotal	\$1,838.50			

Budget Analysis

Analysis of Expenses by Where \$ Went

<i>Funding Source</i>	<i>Total \$\$</i>	<i>NPS</i>	<i>USGS</i>	<i>Other Federal</i>	<i>Univ.-CESU</i>	<i>Univ_Non-CESU</i>	<i>Other non-Federal</i>
I&M - Biol. Inventory \$\$	\$37,000				\$23,618		\$13,383
I&M - VS Monitoring \$\$	\$149,000	\$129,014					\$19,986
Totals	\$186,000	\$129,014			\$23,618		\$33,369

Analysis of Expenses by Category

<i>Funding Source</i>	<i>Total \$\$</i>	<i>Personnel:</i>	<i>Coop Agree.</i>	<i>Contracts</i>	<i>Operations/Equip.</i>	<i>Travel</i>	<i>Other</i>
I&M - Biol. Inventory \$\$	\$37,000			\$29,018		\$7,671	\$312
I&M - VS Monitoring \$\$	\$149,000	\$129,014			\$1,777	\$16,682	\$1,527
Totals	\$186,000	\$129,014		\$29,018	\$1,777	\$24,353	\$1,839

Expense Totals By Category

<i>Category</i>	<i>SubTotal</i>	<i>Percent</i>
2_Personnel	\$129,014	69.36%
3_Coop. Agreements	\$29,018	15.60%
5_Operations/Equipment	\$1,777	0.96%
6_Travel	\$24,353	13.09%
7_Other	\$1,839	0.99%
	\$186,000	

Draft Budget Summary – Fiscal Year 2005

FY05 Work Plan

Network: 26 Southern Plains

Category: 1_Income

<i>Description</i>	<i>\$ Amount</i>	<i>\$\$ Source</i>	<i>Where \$ Went</i>	<i>Comments</i>
Vital Signs	\$389,000.00	I&M - VS Monitoring \$\$		
Water Quality	\$29,000.00	WRD - WQ Monitoring		
Subtotal	\$418,000.00			

Category: 2_Personnel

<i>Description</i>	<i>\$ Amount</i>	<i>\$\$ Source</i>	<i>Where \$ Went</i>	<i>Comments</i>
Data Manager Salary - GS 9	\$55,945.36	I&M - VS Monitoring \$\$	NPS	
Administrative - LYJO	\$10,000.00	I&M - VS Monitoring \$\$	NPS	
STEP Assistant 2	\$7,000.00	I&M - VS Monitoring \$\$	NPS	
Network Coordinator - GS 12	\$81,646.84	I&M - VS Monitoring \$\$	NPS	
STEP Assistant 1	\$7,000.00	I&M - VS Monitoring \$\$	NPS	
Subtotal	\$161,592.20			

Category: 3_Coop. Agreements

<i>Description</i>	<i>\$ Amount</i>	<i>\$\$ Source</i>	<i>Where \$ Went</i>	<i>Comments</i>
Sand Creek Vegetation	\$18,000.00	I&M - VS Monitoring \$\$	University-CESU	
Landscape Vulnerability Conceptual Model	\$30,000.00	I&M - VS Monitoring \$\$	University-CESU	
Vegetation Mapping	\$40,000.00	I&M - VS Monitoring \$\$	University-CESU	
Reservoir Conceptual Model	\$25,000.00	WRD - WQ Monitoring	University-CESU	
Bent's Old Fort Wetland Inventory	\$16,000.00	I&M - VS Monitoring \$\$	University-CESU	
Pinion Juniper Conceptual Model	\$20,000.00	I&M - VS Monitoring \$\$	University-CESU	
Stream Conceptual Model	\$25,000.00	I&M - VS Monitoring \$\$	University-CESU	
Sand Creek - Rare Animals	\$16,000.00	I&M - VS Monitoring \$\$	University-CESU	
Subtotal	\$190,000.00			

Category: 5_Operations/Equipment

Description	\$ Amount	\$\$ Source	Where \$ Went	Comments
Vehicle	\$1,000.00	I&M - VS Monitoring \$\$	Other non-Federal	
Desk/office furniture	\$2,500.00	I&M - VS Monitoring \$\$	Other non-Federal	
Miscellaneous	\$2,407.80	I&M - VS Monitoring \$\$	Other non-Federal	
Computer	\$3,000.00	I&M - VS Monitoring \$\$	Other non-Federal	
Office Supplies/Network Jacks	\$2,000.00	I&M - VS Monitoring \$\$	Other non-Federal	
Subtotal	\$10,907.80			

Category: 6_Travel

Description	\$ Amount	\$\$ Source	Where \$ Went	Comments
IMR I+M Meeting	\$1,000.00	I&M - VS Monitoring \$\$	Other non-Federal	
NPS Certification Workshops	\$16,000.00	I&M - VS Monitoring \$\$	Other Federal	
Board of Directors Meeting	\$7,000.00	I&M - VS Monitoring \$\$	Other non-Federal	
Ecosystem Scoping Sessions	\$20,000.00	I&M - VS Monitoring \$\$	Other non-Federal	
National I+M Meeting	\$2,000.00	I&M - VS Monitoring \$\$	Other non-Federal	
Coordinator Training	\$2,000.00	I&M - VS Monitoring \$\$	Other non-Federal	
Network Data Managers Meeting	\$1,500.00	I&M - VS Monitoring \$\$	Other non-Federal	
Data Manager Training	\$2,000.00	I&M - VS Monitoring \$\$	Other non-Federal	
Water Quality Scoping	\$4,000.00	WRD - WQ Monitoring	Other non-Federal	
Subtotal	\$55,500.00			

Budget Analysis

Analysis of Expenses by Where \$ Went

<i>Funding Source</i>	<i>Total \$\$</i>	<i>NPS</i>	<i>USGS</i>	<i>Other Federal</i>	<i>Univ.-CESU</i>	<i>Univ_Non-CESU</i>	<i>Other non-Federal</i>
I&M - VS Monitoring \$\$	\$389,000	\$161,592		\$16,000	\$165,000		\$46,408
WRD - WQ Monitoring	\$29,000				\$25,000		\$4,000
Totals	\$418,000	\$161,592		\$16,000	\$190,000		\$50,408

Analysis of Expenses by Category

<i>Funding Source</i>	<i>Total \$\$</i>	<i>Personnel:</i>	<i>Coop Agree.</i>	<i>Contracts</i>	<i>Operations/Equip.</i>	<i>Travel</i>	<i>Other</i>
I&M - VS Monitoring \$\$	\$389,000	\$161,592	\$165,000		\$10,908	\$51,500	
WRD - WQ Monitoring	\$29,000		\$25,000			\$4,000	
Totals	\$418,000	\$161,592	\$190,000		\$10,908	\$55,500	

Expense Totals By Category

<i>Category</i>	<i>SubTotal</i>	<i>Percent</i>
2_Personnel	\$161,592	38.66%
3_Coop. Agreements	\$190,000	45.45%
5_Operations/Equipment	\$10,908	2.61%
6_Travel	\$55,500	13.28%
	\$418,000	

Appendix 1: Summary of Major Accomplishments

Southern Plains Inventory and Monitoring Network – This network of 11 parks in Colorado, Kansas, New Mexico, Oklahoma, and Texas includes Alibates Flint Quarries National Monument (ALFL), Bent's Old Fort National Historic Site (BEOL), Capulin Volcano National Monument (CAVO), Chickasaw National Recreation Area (CHIC), Fort Union National Monument (FOUN), Fort Larned National Historic Site (FOLS), Lake Meredith National Recreation Area (LAMR), Lyndon B. Johnson National Historical Park (LYJO), Pecos National Historical Park (PECO), Sand Creek Massacre National Historic Site (SAND), and Washita Battlefield (WABA) National Historic Site. As part of the Servicewide Inventory project, the network has completed inventories for vascular plants, birds, amphibians and reptiles, mammals, and fish at 10 of the 11 parks. The eleventh park, SAND, is a new unit of the National Park Service and is still acquiring land. SOPN has yet to receive inventory funding for this park. SOPN began the vital signs monitoring process by holding scoping sessions in all 11 parks in FY04.

FY 2004 Network Objectives for Biological Inventories:

- Locate and catalog existing park natural resource documents, data sets, and spatial information and ensure that information is readily available.
- Continue conducting inventories to reach the Servicewide goal of documentation for 90% of the vertebrate animal and vascular plant species within the network parks.
- Continue to evaluate status and identify data gaps within the core set of natural resource inventories for network parks, and conduct investigations of these gaps and species of special concern to network parks.

Summary of Major Network Inventory Accomplishments during FY2004 – SOPN has completed the initial biological inventories at the original 10 network parks. Many of these inventories were the first-ever species lists for these parks. In 2004 the list of completed or nearly-completed (draft final reports received) inventories includes: birds, mammals, fish, reptiles, and amphibians at FOLS conducted by Kansas Natural Heritage Inventory; vascular plants, fish, reptiles, amphibians, and mammals at LYJO and vascular plants, birds, fish, mammals, reptiles, and amphibians at LAMR and ALFL conducted by the Nature Conservancy of Texas; vascular plants at FOUN conducted by Natural Heritage New Mexico; and vascular plants at WABA, and fish, birds, mammals, reptiles and amphibians at CHIC conducted by Oklahoma Biological Survey. These inventories identified several endemic, rare and listed species present at these parks. SOPN conducted a thorough review of all existing inventories which resulted in a prioritized list of data gaps in the existing inventories. SOPN began the NPSpecies certification process by conducting an analysis of the quality of data within NPSpecies and the amount of data that still needs to be entered. SOPN gathered natural resource information during visits to all 11 parks, as well as conducting thorough literature reviews of scientific databases.

FY 2004 Network Objectives for Vital Signs Monitoring:

- Hire and retain professional staff and secure office space and facilities that provide a safe, healthy, and productive environment.

- Develop and maintain working and decision-making processes that engages technical staff and managers of network parks.
- Implement and maintain an integrated GIS and data management program.
- Summarize and analyze existing information and concepts important for assessing current and future monitoring efforts and needs in the network parks.
- Identify and prioritize all aquatic indicators (including climatic and atmospheric), including the water quality component of the monitoring plan, and develop protocols and implement programs to monitor the Vital Signs.
- Identify and prioritize all terrestrial indicators (including climatic and atmospheric indicators), and develop protocols to implement programs to monitor Vital Signs.
- Develop and maintain strategies to share information with network parks, scientists, and others interested in the network's I&M program.

Summary of Major Network Vital Signs Monitoring Accomplishments during FY2004

SOPN staff visited and held scoping sessions at all 11 network parks. Information gathered at these sessions and from subsequent questionnaires sent to park staff were used to develop an access database. This database consists of prioritized rankings of natural resource issues and stressors for each individual park, as well as for the whole network. This database will be used and expanded during the entire vital signs selection process. SOPN also forward funded a grassland conceptual model through a task agreement with Dr. Dan Tinker and Dr. Ann Hild at the University of Wyoming. SOPN developed a preliminary staffing plan for the next five years as well as a vital signs implementation plan for FY04 and FY05. A partnership was established with Texas A+M University to provide high level undergraduate and graduate student internships with SOPN. The SOPN also created a webpage for distributing information to SOPN parks and the general public. SOPN created a Procite library database of relevant natural resource information about the 11 network parks. SOPN established an MOA with all 11 network parks that designates the data manager as the point-of-contact for the NPSpecies database. SOPN reduced NPS travel costs by hosting the 2003 and 2004 annual meeting with the Servicewide Comprehensive Call. This resulted in slightly increased travel costs for SOPN, but was a large savings in travel for SOPN parks by reducing two trips to one.

Public Interest Highlights

- A network wide study of the important natural resources and stressors led to the development of an access database that contains prioritized lists of resources and stressors for each individual park as well as for the network as a whole. The highest priority natural resource issues for the SOPN are the grassland community, restoring prairie, water quality, water quantity, and the cottonwood riparian community. The highest priority stressors are exotic plants, endangerment of viewshed, erosion, adjacent land use, and lack of fire management.
- The inventories for vascular plants, birds, reptiles and amphibians, mammals, and fish have now been completed at 10 of the 11 Southern Plains Network (SOPN). The eleventh park, Sand Creek Massacre National Historic Site is a new unit of the National Park Service, and is still undergoing land acquisition.

- Bird inventories have now been completed at 10 of the 11 SOPN parks. These inventories have detected a total of 24 bird species that have been designated as high priority bird species by Partners In Flight for the physiographic region that corresponds to each SOPN park.
- Mammal surveys conducted by the Oklahoma Biological Survey at Chickasaw National Recreation Area detected the Marsh rice rat (*Orzomys palustris*), the first county record for Murray County. This species is listed as imperiled in Oklahoma due to its' extreme rarity (only 6-20 occurrences known in the state). It is vulnerable to extinction throughout its range.
- The vertebrate inventories conducted by The Nature Conservancy at Lyndon B. Johnson National Historical Park documented the presence of 3 endemic species of turtles (Texas map turtle [*Graptemys versa*], Texas cooter [*Pseudemys texana*], and Guadalupe spiny softshell [*Apalone spinifera guadalupensis*]) in the Pedernales River.
- The vertebrate inventories conducted by The Nature Conservancy at Lyndon B. Johnson National Historical Park detected a new Blanco county record for the pygmy mouse (*Baiomys taylori*).
- The vertebrate inventories conducted by The Nature Conservancy at Lyndon B. Johnson National Historical Park detected a new Gillespie county record in the Pedernales River for the brook silverside (*Labidesthes sicculus*).
- Bird surveys conducted by The Nature Conservancy at Lake Meredith National Recreation Area and Alibates Flint Quarries National Monument detected 3 species that are identified as high priority species by Partners In Flight for the Rolling Red Plains Region: scaled quail (*Callipepla squamata*), scissor-tailed flycatcher (*Tyrnanus forficatus*), and Cassin's sparrow (*Aimophila cassinii*).
- Bird surveys conducted by Oklahoma Biological Survey at Chickasaw National Recreation Area detected 6 species that are identified as high priority species by Partners In Flight for the Osage Plains and the Oaks and Prairie Regions: northern bobwhite (*Colinus virginianus*), scissor-tailed flycatcher, Bewick's wren (*Thryomanes bewickii*), painted bunting (*Passerina ciris*), dickcissel (*Spiza americana*), and field sparrow (*Spizella passerina*). Two additional species, the spotted sandpiper (*Acetates macular*) and the Canada goose (*Banta Canadensis*) are designated critically imperiled in the state of Oklahoma (<5 occurrences) by Oklahoma Biological Survey.
- Bird surveys conducted at Fort Larned National Historic Site by Kansas Natural Heritage Inventory detected 2 species that are identified as high priority species by Partners In Flight for the Central Mixed-Grass Region: Bell's vireo (*Vireo bellii*), and dickcissel.
- Surveys conducted by the Oklahoma Biological Survey at Chickasaw National Recreation Area detected 6 mammal species that had never been documented from Murray County.

Appendix 2: Status of SOPN Biological Inventories Projects

Note: Inventories are marked as “Completed” following the publishing of a draft or final report for the funded network inventory projects. An evaluation of the success of the inventory work against the 90% presence/absence goal is contained in the individual project reports and will be the subject of a network-wide report in FY04.

“Existing” denotes that sufficient data was discovered during preparation of the SOPN Biological Inventory Study Plan to document 90% of the species present in a park. “non-NRC” denotes projects that are not being conducted through the NRC funded portion of the I&M program.

State	Park	Vascular plants	Fish	Reptiles and amphibians	Breeding birds	Mammals
Colorado	BEOL	Completed FY02	Completed FY02	Completed FY02	Completed FY03	Completed FY02
	SAND	Not scheduled	Not scheduled	Not scheduled	Initiated FY04	Not scheduled
Kansas	FOLS	Existing	Completed FY04	Completed FY04	Completed FY04	Completed FY04
New Mexico	CAVO	Completed FY03	Not applicable	Completed FY03	Completed FY03	Completed FY03
	FOUN	Completed FY04	Not applicable	Completed FY03	Completed FY03	Completed FY03
	PECO	Existing	Not scheduled	Completed FY03	Completed FY03	Existing
Oklahoma	CHIC	Existing	Existing	Draft Completed FY04	Draft Completed FY04	Draft Completed FY04
	WABA	Draft Completed FY04	Completed FY04 - non-NRC	Existing	Completed field work - non-NRC	Existing
Texas	ALFL	Draft Completed FY04	Not applicable	Draft Completed FY04	Draft Completed FY04	Draft Completed FY04
	LAMR	Draft Completed FY04	Draft Completed FY04	Draft Completed FY04	Draft Completed FY04	Draft Completed FY04
	LYJO	Completed FY04	Draft Completed FY04	Draft Completed FY04	Existing	Draft Completed FY04

